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In re application of: Moses et al.
Application No.: 09/469,637 Group No.: 1651
Filed: December 22, 1999 Examiner: Gitomer, Ralph
For: NON-INVASIVE ENZYME SCREEN FOR TISSUE REMODELLING-ASSOCIATED
CONDITIONS
Office Action Mailed: July 11, 2003
Response Filed:

IN THE CLAIMS

1. - 34. (CANCELED)

35. - 46. (WITHDRAWN)

47. (CANCELED)

48. (CANCELED)

49. (WITHDRAWN)

50. - 55. (CANCELED)

56. - 63. (WITHDRAWN)

64. - 129. (CANCELED)

130. (CURRENTLY AMENDED) A non-invasive method for facilitating the diagnosis of a subject for a ~~matrix metalloproteinase-associated (MMP-associated) cancer of epithelial origin~~, comprising:

obtaining a urine sample from ~~a~~ the subject; and

~~detecting the~~ a presence or absence of a matrix metalloproteinase in the urine sample, wherein the matrix metalloproteinase has a molecular weight from 50 kDa to equal than or greater to approximately 150 kDa; and

wherein correlating the presence or absence of the matrix metalloproteinase is indicative of the presence with the presence or absence of the MMP-associated cancer, thereby facilitating the diagnosis of the subject for the MMP-associated cancer of epithelial origin.

131. - 148 (CANCELED)

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149. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase is a proenzyme.
150. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, further comprising removal of low molecular weight contaminants from the urine prior to the detection step.
151. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the urine is dialyzed.
152. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein subject has previously been treated surgically or hormonally.
153. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the subject has been treated to block testosterone.
154. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase is a gelatinase.
155. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase has a molecular weight of approximately 72 kDa.
156. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase has a molecular weight of approximately 92 kDa.
157. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase has a molecular weight of approximately 150 kDa.
158. (CURRENTLY AMENDED) The method of claim 130-~~or 131~~, wherein the matrix metalloproteinase is detected or monitored electrophoretically.
159. (PREVIOUSLY PRESENTED) The method of claim 158, wherein the electrophoretic pattern is a zymogram.

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160. (CURRENTLY AMENDED) The method of claim 130 or 131, wherein the matrix metalloproteinase is detected or monitored immunochemically.
161. (PREVIOUSLY PRESENTED) The method of claim 160, wherein matrix metalloproteinase is detected or monitored by a radio-immune assay.
162. (PREVIOUSLY PRESENTED) The method of claim 160, wherein the matrix metalloproteinase is detected or monitored by an enzyme-linked immunosorbant assay.
163. (NEW) A non-invasive method for facilitating diagnosis of a subject for a cancer of epithelial origin comprising:
obtaining a urine sample from the subject; and
detecting a presence or absence of at least two matrix metalloproteinases in the urine sample;
wherein the presence of at least two metalloproteinases is indicative of the presence of cancer of epithelial origin.
164. (NEW) A non-invasive method for facilitating diagnosis of a subject for a cancer of epithelial origin comprising:
obtaining a urine sample from the subject; and
detecting a presence or absence of an approximately 72 kDa and an approximately 92 kDa matrix metalloproteinase in the urine sample;
wherein the presence of the approximately 72 kDa and the approximately 92 kDa matrix metalloproteinases is indicative of cancer of epithelial origin.
165. (NEW) A non-invasive method for facilitating diagnosis of a subject for a cancer of epithelial origin comprising:

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obtaining a urine sample from the subject; and

detecting presence or absence of an approximately 72 kDa in the urine sample;

wherein the presence of the approximately 72 kDa matrix metalloproteinases is indicative of cancer of epithelial origin.

166. (NEW) The method of claims 130, 163, 164, or 165, wherein the cancer of epithelial origin is selected from the group consisting of prostate cancer, cancer of the nervous system, breast cancer, retina cancer, lung cancer, skin cancer, kidney cancer, liver cancer, pancreatic cancer, cancer of the genital-urinary or gastrointestinal tract and bladder cancer.
167. (NEW) The method of claims 163, 164, or 165, wherein the matrix metalloproteinase is a proenzyme.
168. (NEW) The method of claims 163, 164, or 165, further comprising removal of low molecular weight contaminants from the urine prior to the detection step.
169. (NEW) The method of claims 163, 164, or 165, wherein the urine is dialyzed.
170. (NEW) The method of claims 163, 164, or 165, wherein subject has previously been treated surgically or hormonally.
171. (NEW) The method of claims 163, 164, or 165, wherein the subject has been treated to block testosterone.
172. (NEW) The method of claims 163, 164, or 165, wherein the matrix metalloproteinase is a gelatinase.
173. (NEW) The method of claims 163, 164, or 165, wherein the matrix metalloproteinase is detected or monitored electrophoretically.

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174. (NEW) The method of claim 173, wherein the electrophoretic pattern is a zymogram.
175. (NEW) The method of claim 163, 164, or 165, wherein the matrix metalloproteinase is detected or monitored immunochemically.
176. (NEW) The method of claim 175, wherein matrix metalloproteinase is detected or monitored by a radio-immune assay.
177. (NEW) The method of claim 175, wherein the matrix metalloproteinase is detected or monitored by an enzyme-linked immunosorbant assay.
178. (NEW) The method of claim 163, wherein at least one of the matrix metalloproteinases has a molecular weight of approximately 72 kDa.
179. (NEW) The method of claim 163, wherein at least one of the matrix metalloproteinases has a molecular weight of approximately 92 kDa.
180. (NEW) The method of claim 163, wherein at least one of the matrix metalloproteinases has a molecular weight of equal to or greater than approximately 150 kDa.